United States Department of the Interior

FISH AND WILDLIFE SERVICE
911 N. E. 11th Avenue
Portland, Oregon 97232-4181

TAKE PRIDE IN AMERICA

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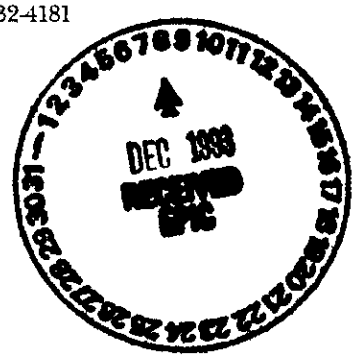

Walter Perro
U.S. Department of Energy
Environmental Restoration Branch
MSIN A5-19 P.O. Box 550
Richland, Washington 99352

Dear Mr. Perro:

The Fish and Wildlife Service (Service) appreciates the opportunity to provide early comments on the document entitled North Slope Expedited Response Action Proposal (ERA), DOE/RL-93-47. The Service understands that you are requesting a review of the content of the document for omissions, concerns, and additional information before the document is released for public review in August.

The ERA proposal evaluates several response action alternatives based upon potential land use categories for early remedial action cleanup of the North Slope area of the Hanford site. One of the land use alternatives is that the site will become part of a proposed National Wildlife Refuge which is being evaluated in a draft Environmental Impact Statement (EIS) for the Hanford Reach of the Columbia River. The Service has placed a high priority on this site, however, the ERA proposal will need to be comprehensive enough to address Service trust resource responsibilities regardless of the outcome of any future land transfers. In that regard, ERA cleanup should address environmental hazards relative to acceptable criteria for fish and wildlife, as well as removing Service liability for future use of the site by the public. The ERA proposal needs to clearly state that the U.S. Department of Energy (DOE) will retain liability for any future hazards to the public and for any additional environmental contaminant cleanup actions that may be identified post ERA cleanup.

The sampling plan for contaminants discussed in the document, relies on known landfills and disposal sites, however, not all landfills were sampled. There is no explanation or criteria for this decision other than a visual inspection of the sites. The Service recommends a complete utilization of a decision making process in selecting the sampling sites, including rationale and criteria for not sampling other sites.

The Service is particularly concerned about the detection of agricultural pesticides (DDT, dieldrin, and methoxychlor) and phthalate esters used as plasticizers at the Nike missile and anti-aircraft sites. Most of these chemicals are usually associated with agriculture, although use at military sites is not unlikely. The concentrations of DDT and DDE detected in sediments are below water and tissue criteria (1µg/g), associated with adverse impacts to wildlife. Surface soil samples, however, were not taken and analyzed for these organic chemicals, therefore, presence at

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levels harmful to avian predators can not be ruled out. Since DDT has a high partition coefficient and can easily bioaccumulate, the Service suggests trapping rodents at several of the military sites to check for bioaccumulation. The criteria of 1 microgram per gram of tissue (National Academy of Science 1973) should be used to determine if significant concentrations of DDT are present. Additional analysis of raptor or magpie egg shells for DDT and DDE would provide data on the biomagnification potential of these compounds.

Contaminant analysis was limited to a few sites and situations. The document should discuss the limitations of the sampling plan in terms of what is not known to date. For example, as no analysis of surface soil samples was done, it is not known whether contaminants are bioavailable to wildlife or subject to surface transport away from the point of origin. Also, as wells were not tested, it is not known whether use of the wells for dumping may have contaminated the aquifers at the depths the wells were screened.

The three alternatives described in the ERA proposal are no action, hazard mitigation, and waste removal. The Service proposes that a fourth alternative be developed where action at individual landfills or individual "trenches" in a landfill is based on site-specific criteria. Use of the waste removal action under this alternative should be based on whether contaminants are present or suspected. Landfills with no identified contaminant concerns would be subject to hazard mitigation actions. The fourth alternative would include auger sampling of each suspected "trench" in a landfill area. While further chemical analysis would add additional expenses, the total cost of the fourth alternative would presumably be considerably lower than under the waste removal option, and contaminant concerns would still be addressed.

Under the proposed fourth alternative, a more specific list of chemical analyses than used previously, could be developed. The list would include those detected at problem levels in previous sampling, and those chemicals which are considered to pose an environmental threat. The list of chemicals should be subject to update if subsequent excavation activities indicates an additional contaminant concern. Samples should be archived for analysis in case an additional contaminant concern is identified later in the cleanup period. Reanalysis of the archived sample and detection of the new contaminant of concern might trigger excavation of a site previously selected for hazard mitigation.

For the waste removal alternative, characterization of the waste as it is removed should occur. This information could be useful for assessing potential contaminant impacts on site, as well as providing documentation for what is deposited at the Hanford Central Landfill Facility.

If landfills are left in place, a monitoring program should be developed to assess the integrity of the landfills. Contingency plans for the removal of the landfills are needed if the monitoring program shows the landfills are failing and having deleterious effects to groundwater, the environment,

human health or fish and wildlife resources. We recommend including a monitoring section in the ERA for landfills.

Regarding the criteria used, the ERA proposal relies on standards set by the Washington State Model Toxics Control Act (MTCA) to determine if an environmental hazard exists. The standards and criteria used in this Act need to be fully discussed in the document. The MTCA action levels are used to evaluate soil contaminant concentrations and are not inclusive of all hazardous materials or easily convertible to fish and wildlife criteria. It should be pointed out that these standards are focused on human health and not necessarily protective of fish and wildlife resources. This suggests the need to complete an ecological risk assessment to address potential impacts to natural resources. Using the state criteria, it appears that problems exist with lead and total petroleum hydrocarbons associated with site H-06, a former Nike missile battery site.

With few criteria defined in the MTCA, the Service recommends utilizing other reference standards. Using the criteria that normal soils have zinc concentrations of less than 200 micrograms per gram and strontium of 280 micrograms per gram, sediment samples show elevated levels of zinc at the anti-aircraft site H-90 and strontium at the three Nike missile batteries. To test for possible bioaccumulation, biological samples should be taken. These same samples can also be analyzed for arsenic, mercury, and silver based on the sediment analyses in Appendix A of the document.

Presumably most of the contaminants were buried at the on site landfills. Some observations of debris, including asbestos tilenite on the ground surface plus the wind erosion of one of the landfills, suggests the need to assess the potential for off site and on site migration and exposure of materials placed in the landfills. Other factors associated with this assessment should include an evaluation of whether, to what degree, and by what methods contaminants are likely to move. Some recommended issues that should be discussed include: rainfall, soil types, groundwater depth, impermeable and semipermeable geological formations, wind velocities, and vegetation cover. These factors should be discussed in the description of the sites evaluated in this document. As an example of how contaminants might be exposed or move, a breach of the Wahluke Branch Canal in the wrong place could mobilize buried contaminants. Canals in the project area have breached in the past.

Standards for obtaining top soil or fill material should be developed in the ERA proposal. The Service recommends that fill material or top soil not be removed from sites that have not been previously disturbed and have a representative native plant community. Standards should also be developed for any cleanup activities which may impact the woody vegetation at the Nike missile sites, anti-aircraft and control sites on the North Slope.

The only available information on post cleanup reclamation is a single sentence describing reseeding with native grasses. A section detailing revegetation procedures should be added to the document. The section should identify grass species to be used, describe planting procedures and post seeding monitoring efforts, and define criteria which would indicate planting

failure and trigger another planting effort. Reclamation should also occur on roads as well as cleanup sites. Irrigation for revegetation of sites should be included in the ERA proposal.

Some site names and numbers are not standardized in the document, causing difficulties for the reader in matching up text, figures, and appendix data. The Service suggests defining the letter and number codes for the landfills, sampling, and military sites and the use of larger size maps for the figures to aid in locating the sites.

The following are some specific comments.

Page 29, first paragraph. The statement beginning as "these analytes are indicative of spraying residue..." should be removed. As all samples were taken several feet below the surface of the ground and some were in areas with vegetation that indicated no previous farming activities, this conclusion does not seem appropriate.

Page 29, last paragraph. The information provided addresses potential for agricultural development only. Please discuss the potential for residential development which could occur with waste removal.

Page 30, Section 5.1. Under the no action alternative, would the Remedial Investigation/Feasibility Statement address all the sites or only the two sites listed under the Tri-Party Agreement?

Page 30, ordnance survey/cleanup paragraphs. The wording in the document gives the impression that only the survey will be conducted. Please include information on cleanup activities.

Page 30, section 7.0. When evaluating alternatives, the no-action alternative needs to be included because it provides a comparison with which the other alternatives can be measured against. We strongly suggest that the ERA include protection of environmental health as one of the criteria. The section titled "Environmental Impacts" assesses only the impact associated with cleanup activities. The potential contaminant impacts of not cleaning up the landfills should also be mentioned.

Page 32, second paragraph. Waste removal will also impact habitat at the waste disposal site and any borrow sites needed to acquire backfill material. These impacts should be discussed.

Page 34, table 7.1. Referring to impacts to vegetation from cleanup as "temporarily" stressed is misleading when this vegetation type may take decades to regenerate.

Page 35, fifth paragraph. This first sentence should read "the waste removal alternative..."

We look forward to continuing to work with you on various assessment, cleanup, and restoration issues at the Hanford Site. If you have questions regarding this memorandum, please contact Don Steffeck, Chief, Division of Environmental Contaminants or Tom O'Brien at (503) 231-6223.

Sincerely,

Acting Assistant Regional Director

Reference:

National Academy of Sciences and National Academy of Engineering, 1973 Water Quality Criteria 1972. U.S. Government Printing Office 594p.